

# Agriculture Water Forum

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November 3, 2016



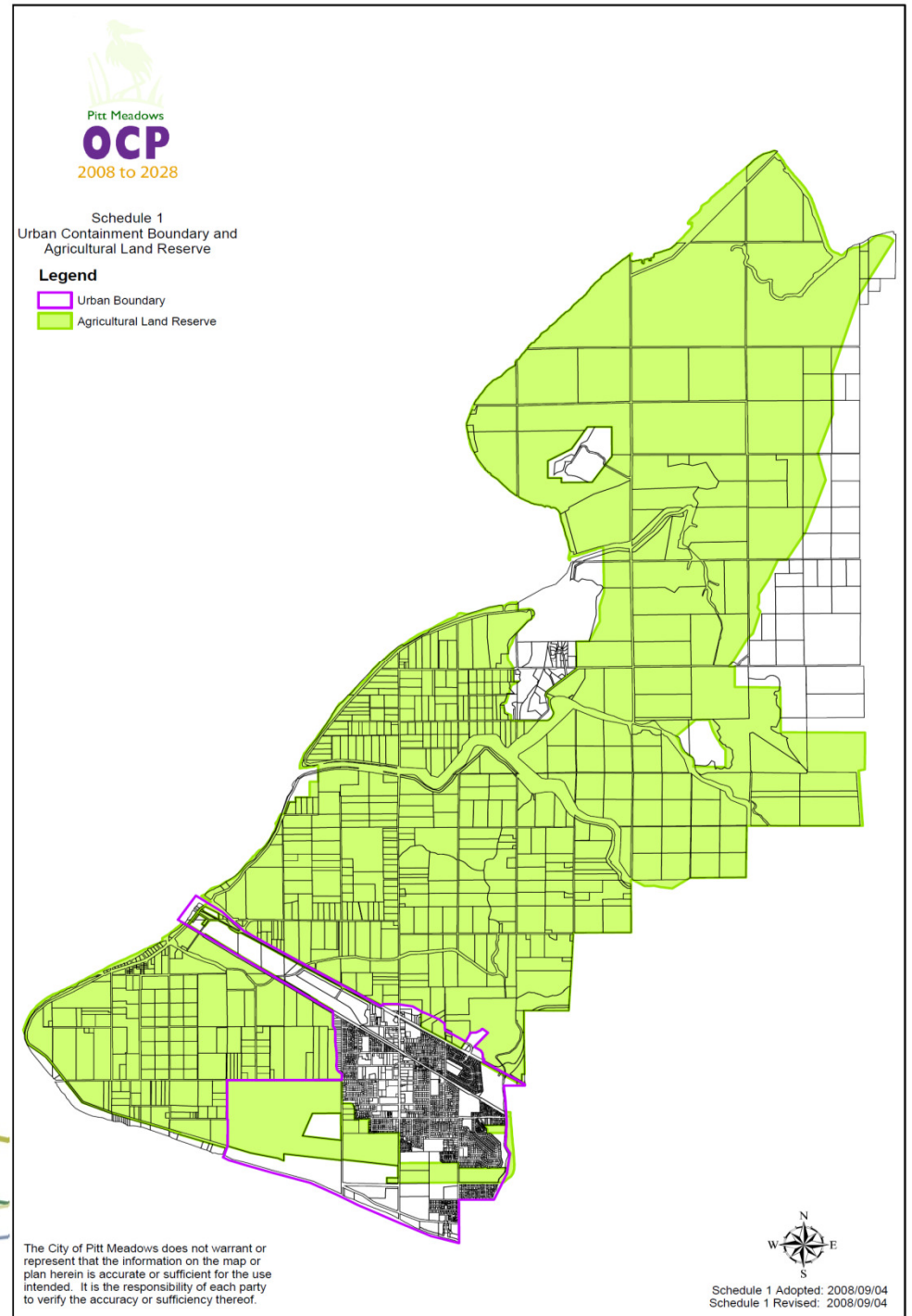
# City Stats

## Land Mass

- 8,322 hectares
- 6,907 hectares are in the ALR (83%)

## Population

- 19,000 Residents



# Infrastructure

## Diking and Drainage

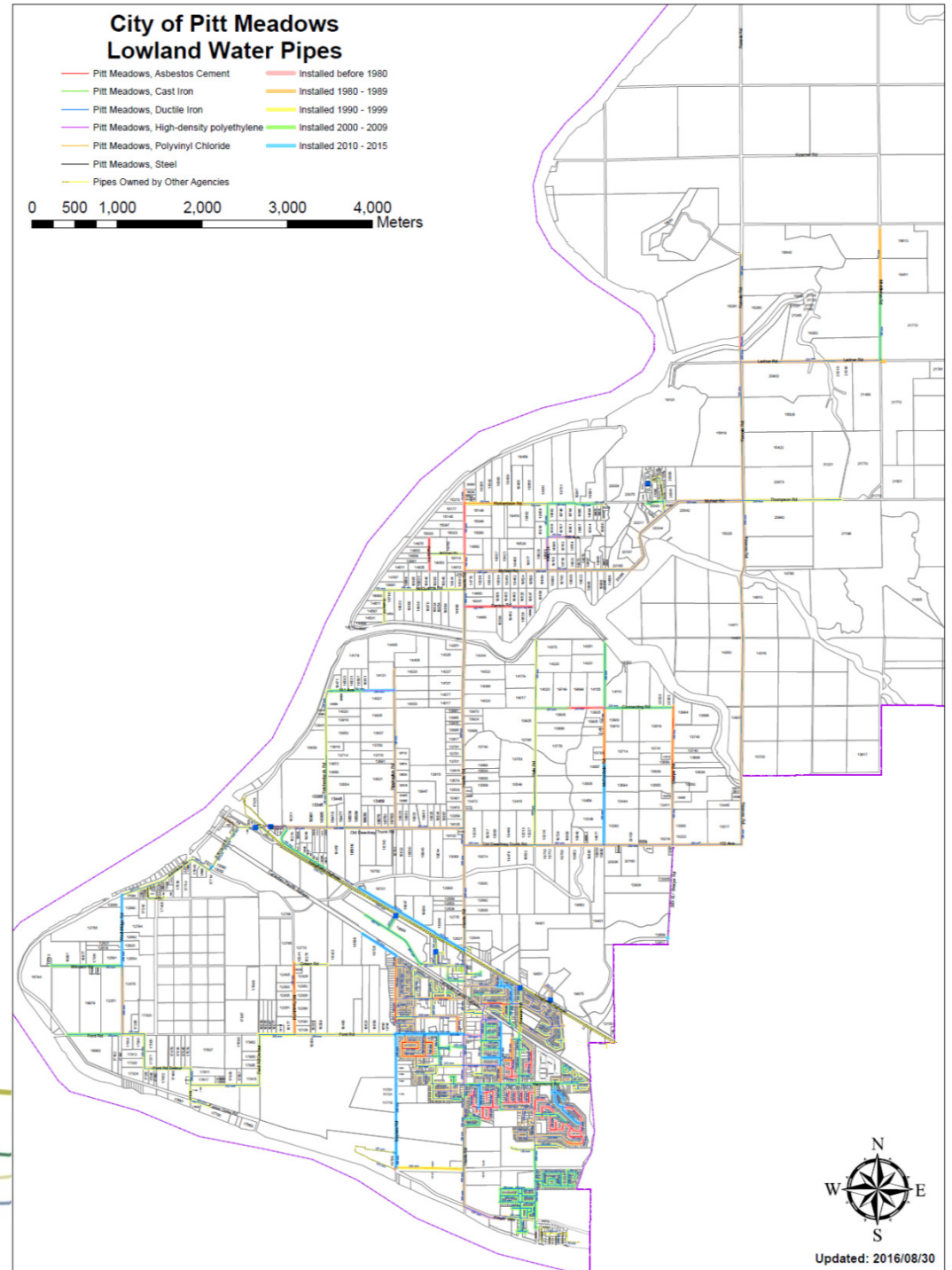
- 60.9 km dikes
- 6 pump stations with 15 pumps
- 740 culverts
- 176.7 km of drainage ditches
- Drainage system is designed, constructed, and maintained to ARDSA requirements



# Infrastructure

## Water

- 6 PRV Stations
- 112.5km of watermain
- 3,935 Service Connections
- 481 Hydrants



# Policies Affecting Agricultural Water Supply

## Potable Water

### Bylaw: Water Works Bylaw

- Restricts the maximum size of a Service Connection to 50mm based on limitations in the distribution system
- Requires water meters for all lands zoned agricultural and all irrigation of crops;

## Non-Potable Water

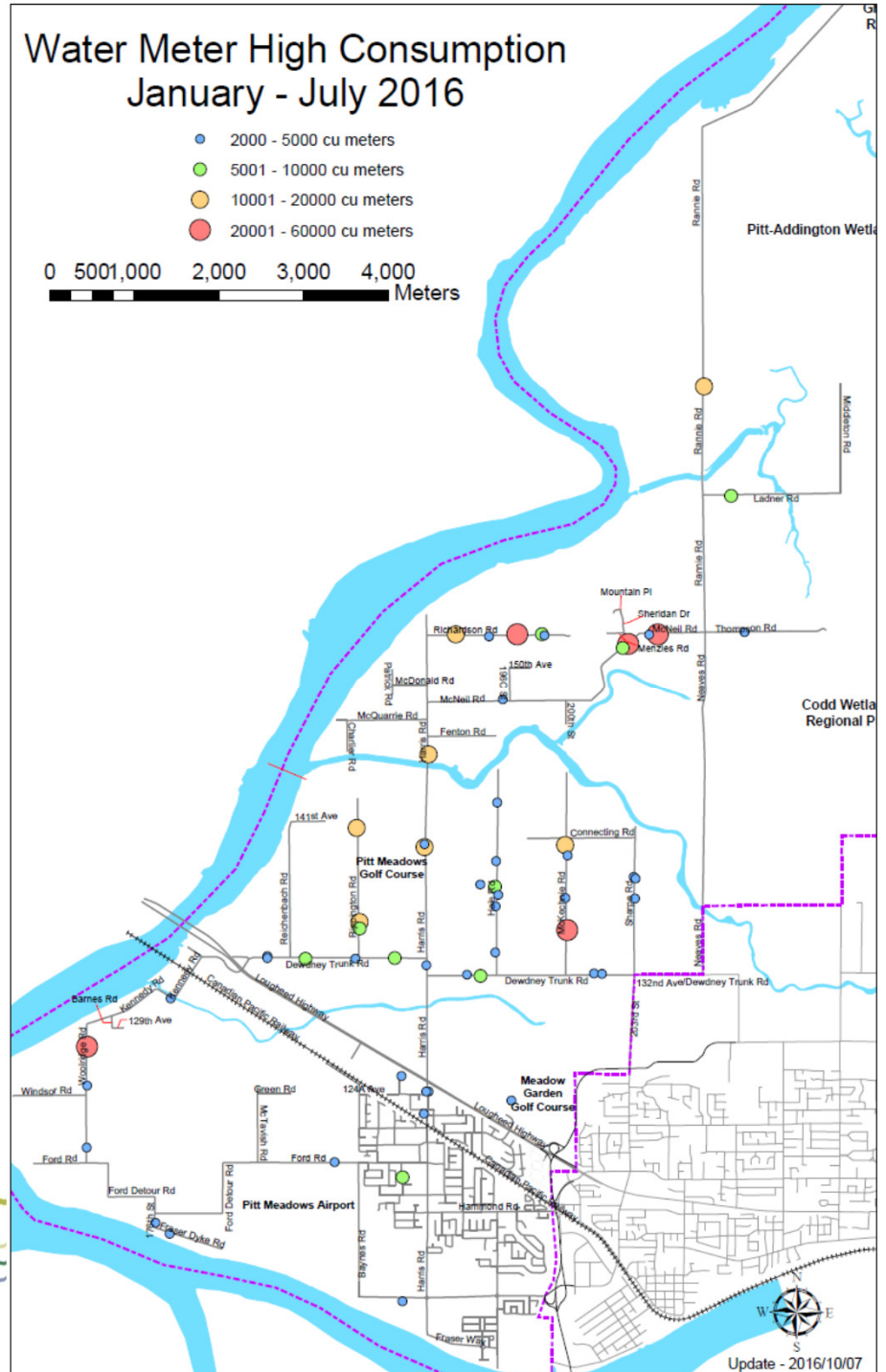
### Council Policy: Administering Internal Drainage Facilities

- Defines pump settings to maintain ditch levels per season per diking and drainage area



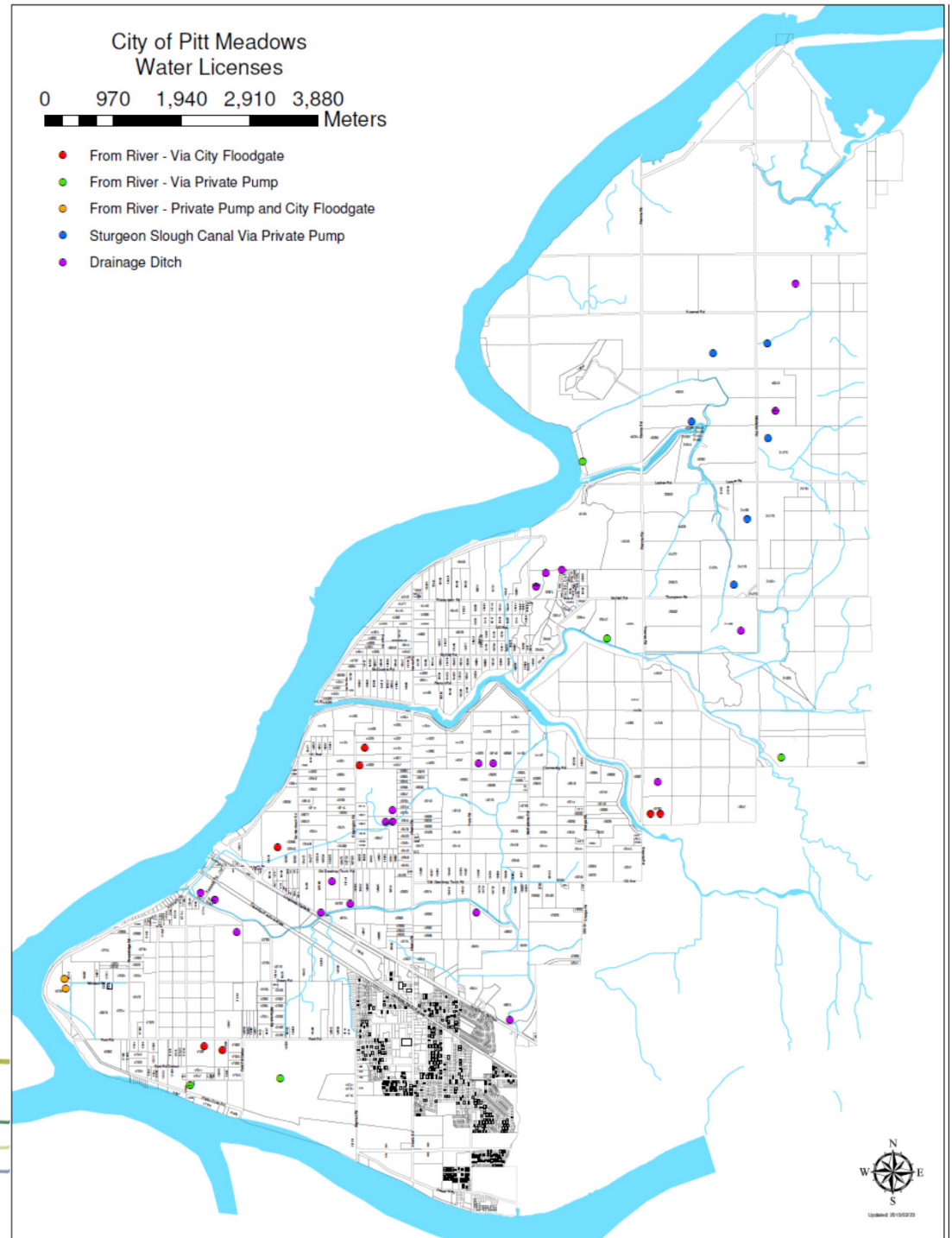
# Current Potable Usage

- Larger consumers are typically nursery's and greenhouses
- Water costs continue to rise
- Distribution system has limited capacity



# Non Potable Usage

- Larger farms 20 + hectares
- Mainly berry producers, cranberry or blueberry
- Overall water usage not monitored by the City



# Challenges for Administering Internal Drainage Council Policy

## Non Potable Source Challenges

- Utilizing the ARDSA drainage system for irrigation
- Maintaining water quantity in the drainage system (flooding concerns)
- Competing interests (drainage system vs. irrigation system)
- Gradient and conveyance constraints (relatively flat topography)
- Maintaining water quality (limited fresh water supply)
- Managing water licences (who has them, what is the source)

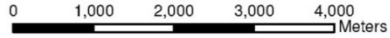
# Seasonal Demand (Drainage vs. Irrigation)

## Administering Internal Drainage Facilities

- Four distinct catchment areas
- Each catchment has separate pump stations and floodgates
- Seasonal settings are applied to each area
- Settings have been in effect since 1990
- Settings provide water levels that meet the overall need of the catchment with input from the Agricultural Advisory Committee
- Pump settings alone *do not* determine area water levels



# City of Pitt Meadows Dyking Districts



- Pump Station (With Floodgate)
- Pump Station (No Floodgate)
- ▲ Floodgates



# Seasonal Demand

## Administering Internal Drainage Facilities

- Pump settings to control levels are seasonal
- Typically there are three distinct settings:
  - Winter (to keep ditches low for storage)
  - Summer (to raise water levels for irrigation)
  - Spring and Fall (frost protection)





# Seasonal Demand (Drainage vs. Irrigation)

## Administering Internal Drainage Facilities

- Pump settings are one factor that controls water levels
- Clogged ditches, beaver dams, usage, and precipitation also attribute to water levels
- Pump on and off (settings) take time to drain any catchment
- Land closest to pump stations receive the most benefit
- Outlying areas respond as a factor of time and conveyance



# Competing Interests

- Irrigation
  - Hay
  - Corn
  - Blueberries
  - Cranberries
  - Livestock
- Flood protection
- Fire suppression
- Drinking water
- Fish Habitat
- Invasive species
- Recreational
- Water licences

# Next Steps

How do we secure a dependable and sustainable water supply for agriculture?

## Integrated Water Management Master Plan

- Farm Friendly (crop dependent)
- Water Quality
- Water Quantity
- Public Safety / Drainage
- Recreational
- Environment
- Fish Habitat
- Invasive Species



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The *Natural* Place

# Questions?

